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Blanche E Schiller Esq  
Heslin & Rotherberg PC  
5 Columbia Circle  
Albany, NY 12203

EXAMINER

VO, LILIAN

ART UNIT PAPER NUMBER

2127

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8

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/583,797

Applicant(s)

UCEDA-SOSA ET AL.

Examiner

Lilian Vo

Art Unit

2127

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 48 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 48 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

1. Claims 1 – 48 are pending.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claim 1, 4, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by NEC Corporation (JP 07200321 A).

4. Regarding **claim 1**, Nec Corp. discloses a method of managing the locking of resources of a data repository, said method comprising:

determining a relationship between a plurality of resources of said data repository, wherein said relationship is at least one of a containment-based relationship and a reference-based relationship (abstract); and

locking at least one resource of said plurality of resources based on said relationship (abstract).

5. **Claims 4 and 7** are rejected on the same ground as stated in claim 1 above.

***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1 – 9, 10, 22, 23, 34, 35, 36, 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soltis et al (US 6,493,804, hereinafter Soltis) in view of Huber (US 5,802,514).

8. Regarding **claim 1**, Soltis discloses a method of managing the locking of resources of a data repository, said method comprising:

a relationship between a plurality of resources of said data repository, wherein said relationship is at least one of a containment-based relationship and a reference-based relationship (figs. 5 and 6: containment-based relationship. Col. 5, line 63 – col. 6, line 8); and

locking at least one resource of said plurality of resources based on said relationship (abstract, col. 3, lines 39 – 63, col. 14, lines 33 – 55, col. 19, lines 15 - 34).

Soltis did not clearly disclose the step of determining the relationship between the resources. Nevertheless, Huber discloses the step of determining the relationship between database entities (abstract, col. 1, lines 40 – 63, col. 17, lines 29 – 32, 45 - 50).

It would have been obvious for one of an ordinary skill in the art, at the time the invention was made, to incorporate Huber's teaching to Soltis' system so that resource locking which associates with different types of resource relationship can be performed appropriately.

9. Regarding **claim 2**, Soltis discloses a method of claim 1, wherein said locking of said at least one resource is performed without locking at least one other resource of said plurality of resources (col. 3, lines 41 – 64 and col. 18, line 62 – col. 19, line 11).

10. Regarding **claim 3**, Soltis discloses a method of claim 1, wherein said locking of said at least one resource is further based on an operation to be performed (abstract, col. 9, lines 42 – 65).

11. Regarding **claim 10**, Soltis discloses a method of claim 3, wherein the operation comprises at least one of create, delete, read and write (col. 9, lines 42 – 65, col. 14, lines 33 – 55, col. 19, lines 15 – 34).

12. Regarding **claim 21**, Soltis did not clearly disclose the additional limitation as claimed. Nevertheless, Huber discloses the determining comprises employing a set of policies (col. 1,

lines 40 – 63). It would have been obvious for one of ordinary skill in the art, at the time the invention was made to incorporate this feature to Huber to assist in finding the necessary information.

13. Regarding **claim 22**, Soltis discloses the method of claim 1, wherein at least one resource comprises at least one of a table and a directory (fig. 5).

14. **Claims 4 – 9, 23, 34, 35, 36, 47 and 48** are rejected on the same ground as stated above.

15. Claims 11 – 14, 24 – 27 and 37 - 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soltis (US 6,493,804) in view of Huber (US 5,802,514) as applied to claims 1, 3, 4, 7, 10, 23, and 36 above, and further in view of Shaughnessy (US 5,555,388).

16. Regarding **claim 11**, Soltis discloses a method of claim 10, wherein the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource in fig 5.

However, Soltis and Huber did not clearly specify the locking comprises write locking the first resource in order to create an instance of the second resource. Nevertheless, Shaughnessy discloses of write locking the first resource in order to create an instance the second resource (col. 9, line 44 – col. 10, line 37).

It would have been obvious for one of ordinary skill in the art, at the time the invention was made to incorporate this feature to Soltis and Huber to prevent other users from changing the contents of a family of objects (col. 9, lines 66 – col. 10, lines 1).

17. Regarding **claim 12**, Soltis discloses a method of claim 10, wherein the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource in fig. 5.

However, Soltis and Huber did not clearly specify the locking comprises write locking the first resource and the second resource in order to delete an instance of the second resource. Nevertheless, Shaughnessy discloses of write locking the first resource and the second resource in order to delete an instance the second resource (col. 9, line 44 – col. 10, line 37).

It would have been obvious for one of ordinary skill in the art, at the time the invention was made to incorporate this feature to Soltis and Huber to obtain exclusive access on an object and ensure data consistency.

18. Regarding **claim 13**, Soltis discloses a method of claim 10, wherein the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource in fig. 5.

However, Soltis and Huber did not clearly specify the locking comprises read locking the second resource in order to read therefrom. Nevertheless, Shaughnessy discloses of read locking the resource in order to read therefrom (col. 9, line 18 – col. 10, line 37 and col. 15, lines 42 - 44). It would have been obvious for one of ordinary skill in the art, at the time the invention was made to incorporate this feature to Soltis and Huber to provide concurrent access to data.

19. Regarding **claim 14**, Soltis discloses a method of claim 10, wherein the relationship is a containment-based relationship, wherein the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource in fig. 5.

However, Soltis and Huber did not clearly specify the locking comprises write locking the second resource in order to write thereto. Nevertheless, Shaughnessy discloses of write locking the resource in order to write thereto (col. 9, line 18 – col. 10, line 37).

It would have been obvious for one of ordinary skill in the art, at the time the invention was made to incorporate this feature to Soltis and Huber to prevent other users from changing that object in anyway (col. 9, lines 66 – col. 10, line 1).

20. **Claims 24 – 27 and 37 - 40** are rejected on the same ground as stated above.



21. Claims 15 –20, 28 – 33 and 41 - 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Soltis (US 6,493,804) in view of Huber (US 5,802,514) as applied to claims 1, 3, 4, 7, 10, 23, and 36 above, and further in view of Annevelink (US 5,448,727).

22. Regarding **claim 15**, Soltis discloses the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource in fig. 5 and Huber discloses the relationship is a reference-based relationship (fig. 4).

However, Soltis and Huber did not clearly show the locking comprises write locking the first resource in order to delete the first resource. Nevertheless, Annevelink discloses of reference-based relationship (col. 18, table 4 and fig. 6) and write locking the object in order to delete the object (col. 12, lines 27 – lines 31, lines 42 - 63). It would have been obvious for one of ordinary skill in the art, at the time the invention was made to incorporate this feature to Soltis and Huber to improve concurrency in database accesses.

23. Regarding **claim 16**, Soltis discloses the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource in fig. 5, and Huber discloses the relationship is a reference-based relationship (fig. 4).

However, Soltis and Huber did not clearly show the locking comprises write locking the first resource in order to create an instance of the second resource. Nevertheless, Annevelink discloses of reference-based relationship (col. 18, table 4 and fig. 6) and write locking the object

in order to create an instance of another object (col. 11, lines 36 – 52, col. 12, lines 27 – lines 31, lines 42 – 63, col. 13, lines 25 - 46). It would have been obvious for one of ordinary skill in the art, at the time the invention was made to incorporate this feature to Soltis and Hubert to improve concurrency in database accesses.

24. Regarding **claim 17**, Soltis discloses the at least one resource comprises at least one instance of a first resource and a second resource, at least one of the at least one instance of the first resource referencing the second resource in fig. 5, and Huber discloses the relationship is a reference-based relationship (fig. 4).

However, Soltis and Huber did not clearly show the locking comprises write locking the at least one of the at least one instance of the first resource in order to delete the second resource. Nevertheless, Annevelink discloses of reference-based relationship (col. 18, table 4 and fig. 6) and write locking the object in order to delete another referencing object (col. 12, lines 27 – lines 31, lines 42 - 63). It would have been obvious for one of ordinary skill in the art, at the time the invention was made to incorporate this feature to Soltis and Huber to improve concurrency in database accesses.

25. Regarding **claim 18**, Soltis discloses the at least one resource comprises a first resource and a second resource, the first resource referencing the second resource in fig. 5, and Huber discloses the relationship is a reference-based relationship (fig. 4).

However, Soltis and Huber did not clearly show the locking comprises read locking the first resource and the second resource in order to read the second resource. Nevertheless, Annevelink discloses of reference-based relationship (col. 18, table 4 and fig. 6) and read locking the object in order to read the object (col. 12, lines 27 – lines 31, lines 42 - 63). It would have obvious for one of ordinary skill in the art to obtain read locking the second resource (the second object) that is being referenced by the first resource (first object) in order to access the second object. It would have been obvious for one of ordinary skill in the art, at the time the invention was made to incorporate this feature to Soltis and Huber to improve concurrency access to the database.

26. Regarding **claim 19**, Soltis discloses the at least one resource comprises at least one instance of a first resource and a second resource, at least one of the at least one instance of the first resource referencing the second resource in fig. 5, and Huber discloses the relationship is a reference-based relationship (fig. 4).

However, Soltis and Huber did not clearly show the locking comprises read locking the first and second resource and write locking the second resource in order to write to the second resource. Nevertheless, Annevelink discloses of reference-based relationship (col. 18, table 4 and fig. 6) and write locking the object in order to delete/write another referencing object (col. 12, lines 27 – lines 31, lines 42 - 63). It would have been obvious for one of ordinary skill in the art, at the time the invention was made to incorporate this feature to Soltis and Huber to improve concurrency in database accesses.

27. Regarding **claim 20**, Soltis discloses the at least one resource comprises a first resource, a second resource and a third resource, the first resource and second resource referencing the third resource in fig. 5. Huber discloses the relationship is a reference-based relationship (fig. 4).

However, Soltis and Huber did not clearly show the locking comprises read locking the first and second resource and write locking the third resource in order to write the third resource. Nevertheless, Annevelink discloses of reference-based relationship (col. 18, table 4 and fig. 6) and write locking the objects in order to write to the third object (col. 12, lines 27 – lines 31, lines 42 - 63). It would have been obvious for one of ordinary skill in the art, at the time the invention was made to incorporate this feature to Soltis and Huber to improve concurrency access to the database.

28. **Claims 28 - 33 and 41 - 46** are rejected on the same ground as stated above.

### ***Response to Arguments***

29. Applicants' arguments with respect to claims 1, 4 and 7 have been considered but are moot in view of the new ground(s) of rejection as set forth above.

### ***Conclusion***

30. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Xia (US 6,154,849), Breuker et al. (6,308,166 B1), McPartlan et al. (US Pat. App.

Pub. 2003/0215083 A1), Du et al. (US 6,308,163 B1), and Smiley (US 6,263,341 B1) disclose the determining a relationship between resources.


31. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lilian Vo whose telephone number is 703-305-7864. The examiner can normally be reached on Monday - Thursday, 7:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 703-305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lilian Vo  
Examiner  
Art Unit 2127

lv  
April 8, 2004

  
**MENG-AL T. AN**  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2100